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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,802	12/08/2003	Kia Silverbrook	ZF132US	8920
24011	7590	10/14/2005		
SILVERBROOK RESEARCH PTY LTD 393 DARLING STREET BALMAIN, 2041 AUSTRALIA			EXAMINER LEBRON, JANNELLE M	
			ART UNIT 2861	PAPER NUMBER

DATE MAILED: 10/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/728,802

Applicant(s)

SILVERBROOK, KIA

Examiner

Jannelle M. Lebron

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/12/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 12/12/2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of printhead modules, the inkjet printer, and the fiducials must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

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consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claim 3 is objected to because of the following informalities: the word "with" should be replaced by "within". Appropriate correction is required.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double

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patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-6 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,802,594.

6. Below is a table of comparison between the conflicting claims that show why they are not patentably distinct from each other:

<u>10/728802</u>	<u>6,802,594 B2</u>
<p>1. A printhead assembly for an inkjet printer, the printhead assembly comprising: a support member for mounting the printhead assembly within an inkjet printer; a plurality of printhead modules mounted to the support member;</p> <p>the support member has a first component and a second component; wherein,</p> <p>the first component has a coefficient of thermal expansion that differs from the coefficient of thermal expansion of the printhead modules; the second component with a coefficient of thermal expansion that differs from the coefficient of thermal expansion of the first component to give the printhead assembly an overall coefficient of thermal expansion; such that,</p>	<p>A system for aligning a plurality of printhead modules mounted on a support member in a printer [column 4, lines 8-9]</p> <p>wherein the beam has a core of silicon and an outer metal shell [column 4, lines 22-25]. [The outer metal shell is taken as the first component and the silicon core is taken as the second component.]</p> <p>[The silicon core and the printhead are made from different materials and thus have different coefficients of thermal expansion. Also, the support member components are made from different materials, a dielectric and a metal, and thus have different coefficients of thermal expansion as well.]</p>

<p>the difference between the overall coefficient of thermal expansion and the coefficient of thermal expansion of the printhead modules, is less than the difference between the coefficient of thermal expansion of the first component and the coefficient of thermal expansion of the printhead modules.</p>	<p>[It is an inherent property of the silicon core to have a coefficient of thermal expansion closer to that of the printhead chip than the metal shell. Because the overall coefficient of thermal expansion includes the coefficients of the dielectric and the metal, the difference between it and the coefficient of the printhead is going to be less than the difference between the latter and the metal core.]</p>
<p>2. A printhead assembly according to claim 1 wherein the support member is a beam and the printhead modules include MEMS manufactured chips having at least one fiducial on each; wherein,</p> <p>the fiducials are used to misalign the printhead modules by a distance calculated from:</p> <ul style="list-style-type: none"> i) the difference between the coefficient of thermal expansion of the beam and the printhead chips; ii) the spacing of the printhead chips along the beam; and, iii) the difference between the production temperature and the operating temperature. 	<p>wherein the support member is a beam and the printhead modules include MEMS manufactured chips having at least one fiducial on each [column 4, lines 9-13]; wherein,</p> <p>the fiducials are used to misalign the printhead modules by a distance calculated from:</p> <ul style="list-style-type: none"> i) the difference between the coefficient of thermal expansion of the beam and the printhead chips; ii) the spacing of the printhead chips along the beam; and, iii) the difference between the production temperature and the operating temperature [column 4, lines 15-21].
<p>3. A printhead assembly according to claim 2 wherein the first component of the beam is an outer metal shell, and the second component of the beam is a core of silicon with the outer metal shell.</p>	<p>A system for aligning a plurality of printhead modules mounted to a support member and a printer according to claim 1 wherein the beam has a core of silicon and an outer metal shell [column 4, lines 22-25].</p>
<p>4. A printhead assembly according to claim 3 wherein the beam is adapted to allow limited relative movement between the silicon core and the metal shell.</p>	<p>A system for aligning a plurality of printhead modules mounted to a support member in a printer according to claim 3 wherein the beam has an elastomeric layer between the silicon core and metal shell to permit the limited relative movement [column 4, lines 30-34].</p>
<p>5. A printhead assembly according to claim 4 wherein the beam includes an elastomeric layer interposed between the silicon core and metal shell.</p>	

<p>6. A printhead assembly according to claim 3 wherein the outer shell is formed from laminated layers of at least two different metals.</p>	<p>A system for aligning a plurality of printhead modules mounted to a support member in a printer according to claim 4 wherein the outer shell is formed from laminated layers of at least two different metals [column 4, lines 35-38].</p>
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7. Claim 7 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of U.S. Patent No. 6,802,594 in view of Silverbrook (US Patent 6,652,071). Patent 6,802,594 meets the claimed limitations except "wherein the printhead is a pagewidth printhead for printing across the width of a page simultaneously."

8. Patent 6,652,071 discloses a printhead assembly for an inkjet printer very similar in its properties and function as the one in Patent 6,802,594 "wherein the printer is a pagewidth printer." It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to use a pagewidth printhead on the printer of the claimed invention in 6,802,594. One would have been motivated to so modify 6,802,594 to print across the width of the page thereby increasing printing speeds as taught in 6,652,071. .

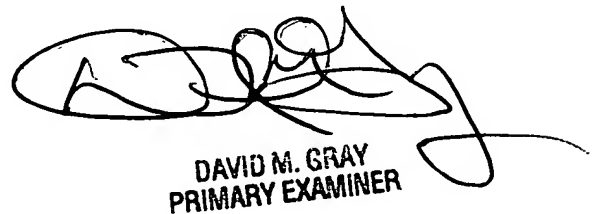
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jannelle M. Lebron whose telephone number is (571) 272-2729. The examiner can normally be reached on Monday thru Friday 8:30am-5:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David M. Gray can be reached on (571) 272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JML



DAVID M. GRAY
PRIMARY EXAMINER